

REMARKS

Summary of the Office Action

Claims 88-165 are pending.

Claims 88-145 are allowed.

Claims 146, 150-154, 156, and 160-164 were rejected under 35 U.S.C. § 102(b) as being anticipated by Faris U.S. Patent No. 5,786,629 (hereinafter "Faris").

Claims 147, 148, 157, and 158 were rejected under 35 U.S.C. § 103(a) as being obvious over Faris in view of Wojnarowski U.S. Patent No. 5,324,687 (hereinafter "Wojnarowski").

Claims 149, 155, 159, and 165 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

Summary of Applicant's Amendments

Applicant has added claims 166 and 167 in order to more particularly point out and distinctly claim the subject matter that applicant regards as the invention.

Applicant has amended claims 146 and 156 in order to expedite prosecution.

Applicant has amended claims 119, 121, 124, 140, 141, 148, 149, 158, and 159 in order to more particularly

point out and distinctly claim the subject matter that applicant regards as the invention.

Summary of Telephonic Interview

On August 9, 2005, Examiner Perkins held a telephonic interview with the undersigned.

During the August 9, 2005 telephonic interview, applicant pointed out to the Examiner that claims 146 and 156 were at least referenced on page 16 of applicant's specification.

Applicant's Reply to the Rejection Under 35 U.S.C. § 102(b)

Claims 146, 150-154, 156, and 160-164 were rejected under 35 U.S.C. § 102(b) as being anticipated by Faris.

Applicant's specification describes substantially flexible dice having integrated circuits formed thereon. The dice are stacked and bonded in layers. Particularly, bonds are formed between each layer.

Faris describes integrated circuits having fillo-leafs connected on the outer edges of the fillo-leafs. Faris explicitly prevents conductive paths from being formed from, or on the backside of, the fillo-leafs.

Claim 146

The Examiner stated that "Faris discloses ... between adjacent dice, a bonding layer bonding together the adjacent dice" and "the bonding layer bonding first and second ... planar adjacent surfaces of the adjacent dice." (Office Action, Page 2.)

Faris, however, does not show or suggest bonds formed between adjacent surfaces other than at the edge of the surfaces of the fillo-leafs. Particularly, "module 1 includes a plurality of ... fillo-leafs 2 which are bonded together at their edges 3 so that fillo-leafs 2 extend in a cantilevered fashion from the bonded edges 3." (Faris, column 4, lines 53-56; See also FIG. 1.)

Applicant's invention, as defined by claim 146, however, includes a bonding layer between adjacent dice that bonds together the adjacent dice by bonding the first and second substantially planar adjacent surfaces of the adjacent dice. Applicant's invention, as defined by claim 146, also includes at least one or more portions of the bonding layer being located other than at the edges of the adjacent die.

For at least this reason, applicant respectfully submits that independent claim 146, and any claims dependent therefrom, is patentable over Faris. Applicant respectfully

requests that the Examiner's rejections of claim 146 and 150-154 in view of Faris be withdrawn.

Claim 156

The Examiner stated that "Faris discloses ... between adjacent dice, a bonding layer bonding together the adjacent dice" and "the bonding layer bonding first and second ... planar adjacent surfaces of the adjacent dice." (Office Action, Page 2.)

As shown above in connection with applicant's arguments for claim 146, Faris does not show or suggest bonds formed between adjacent surfaces other than at the edge of the surfaces of the fillo-leafs. Applicant's invention, as defined by claim 156, however, includes "a semiconductor die having an integrated circuit formed thereon bonded to the first surface of the substrate with conductive paths between the substrate and the die." Applicant's invention, as defined by claim 156, also includes a semiconductor die that is attached to a first surface of the substrate by one or more bonds including one bond located other than at the edges of the semiconductor die.

For at least this reason, applicant respectfully submits that independent claim 156, and any claims dependent

therefrom, is patentable over Faris. Applicant respectfully requests that the Examiner's rejections of claim 156 and 160-164 in view of Faris be withdrawn.

Applicant's Reply to the Rejection Under 35 U.S.C. § 103(a)

Claims 147, 148, 157, and 158 were rejected under 35 U.S.C. § 103(a) as being obvious over Faris in view of Wojnarowski.

Claims 147, 148, 157, and 158 depend from either claim 146 or 156. As shown above, claims 146 and 156 are allowable. Accordingly, applicant respectfully submits that claims 147, 148, 157, and 158 are allowable.

Amended Claims 149, 155, 159, and 165

Claims 149, 155, 159, and 165 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

Claims 149, 155, 159, and 165 depend from either claim 146 or 156. As shown above, claims 146 and 156 are allowable. Accordingly, applicant respectfully submits that claims 149, 155, 159, and 165 are allowable.

New Claims 166 and 167

Applicant has added claims 166 and 167 in order to more particularly point out and distinctly claim the subject matter that applicant regards as the invention.

New claims 166 and 167 depend from claims 146 and 156. As shown above, claims 146 and 156 are allowable. Accordingly, applicant respectfully submits that claims 166 and 167 are allowable.

Conclusion

For the reasons set forth above, applicant respectfully submits that this application is in condition for allowance. Reconsideration and allowance of this application are respectfully requested.

Respectfully submitted,

Jeffrey D. Mullen
Reg. No. 52,056
Agent for Applicant
FISH & NEAVE IP GROUP
ROPES & GRAY LLP
Customer No. 1473
1251 Avenue of the Americas
New York, New York 10020-1105
Tel.: (212) 596-9000
Fax: (212) 596-9090